

Survey of the Byzantine Settlement at Çanlı Kilise in Cappadocia: Results of the 1995 and 1996 Seasons

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INTRODUCTION

The systematic survey of the Byzantine settlement known as Çanlı Kilise, near Akhisar in western Cappadocia, was begun during the summer of 1994 with the intent of documenting the site as fully as possible with minimal intervention. As unimaginative as this might sound, no such site survey had been attempted previously in Byzantine Cappadocia. Our work on site has consisted primarily of measuring and mapping, augmented by minimal cleaning to expose the lines of the architectural remains. The first season concentrated on the distinctive masonry church, after which the site is named, and the area immediately around it, and the results have been published in the annual proceedings of the International Symposium of Excavations, Surveys, and Archaeometry at Ankara.¹

As we began the detailed examination of the extensive rock-cut settlement around the church, it became evident that we were *not* dealing with a monastic settlement, as we and others had supposed, but with a town.² Rather than diminishing the value of our study, I believe this increases its significance in a variety

of ways. If our conclusion is correct, it means, first, that other “monastic” settlements in Cappadocia must be reexamined. Cappadocia is assumed to have been an area of intensive monastic settlement during the Byzantine period, but there is little to support this claim.³ Perhaps more important, it also means that there is much more to Cappadocia than painted cave churches. The area, so rich in physical remains, should be seen as an untapped resource for the study of domestic architecture, urban and regional planning, and settlement patterns during the middle Byzantine period. Our 1995 and 1996 seasons—conducted during three-week periods in June and July—concentrated on the organization of the settlement and the detailed examination of its individual elements.⁴

³See my discussion of this problem in the 1994 survey report (above, note 1) and in “An *Apologia* for Byzantine Architecture,” *Gesta* 25 (1996), 21–33, esp. 28–32.

⁴These seasons were generously supported by Dumbarton Oaks Project Grants, and I am pleased to present the results here. Additional financial support was provided by the University of Illinois and by the American Research Institute in Turkey, whose assistance I gratefully acknowledge. We are also grateful to the Turkish Ministry of Culture and the General Directorate of Monuments and Museums for permission to survey, and to the Aksaray Museum for its interest in our project.

We were assisted by an international team of students. For the 1995 season, participants included Alexandra Jo Bell and Jonathan Godfrey (University of Newcastle upon Tyne), Nilay Çorağan (Hacettepe University, Ankara), and Thomas Donalek, Mary Farlander, Henry Hill II, Amy Mayer, Richard Osgood Jr., Anthony Rubano, Charles Sejud, Lynne Sprincz, and Philip Storey (University of Illinois). During the 1996 season, Jonathan Godfrey and Alexandra Jo Bell served as assistant project directors; other participants included İzel Coşkun, Anthony Emrick,

¹For the first season's report, see R. Ousterhout, “The 1994 Survey at Akhisar-Çanlı Kilise,” in *XIII. Araştırma Sonuçları Toplantısı* (Ankara, 1996), 165–80.

²Gertrude Bell, in W. Ramsay and G. Bell, *The Thousand and One Churches* (London, 1909), 404–18, says, “I have no doubt the whole settlement was monastic.” Hans Rott, in *Kleinasiatische Denkmäler aus Pisidien, Pamphylien, Kappadokien, und Lykien* (Leipzig, 1908), 257–62, came to a similar conclusion. Without examination, Lyn Rodley, in *Cave Monasteries of Byzantine Cappadocia* (Cambridge, 1985), 120, upholds this view.

THE SETTLEMENT

A line of rock-carved units extends for about one kilometer, in a reverse S-curve, following a line of exposed volcanic tuff along the slope of the hill to the east and to the northwest of the church (Fig. 1). Using a Total Station EDM (electronic distance measurer), on special loan from the British Institute of Archaeology in Ankara, we took coordinates for the preparation of a contour plan of the site, which is reproduced here (Fig. 2). The use of the EDM allowed us to work rapidly while ensuring a degree of accuracy in our results. All of the architectural features were measured and recorded by hand and then provided with coordinates to relate them to the contour plan. The final site plan combines the results of our high-tech and low-tech recordings (Fig. 3).

The settlement would appear to date primarily from the tenth and eleventh centuries, based on building typologies and the styles represented by its paintings. This flourishing was followed by a period of gradual decline and abandonment, ending perhaps as late as the fourteenth century. Although we do not know its Byzantine name, the site would appear to have been considerably less provincial and less isolated than the now more famous settlements in eastern Cappadocia. A few kilometers west of Çanlı Kilise, above Akhisar, was the fortress known in the Arab sources as Hisn Sinan, critical to the defense of Cappadocia during the Arab invasions, and further northwest, at Koloneia (modern Aksaray), was a major crossroad.⁵ About 20 km south, above Helvadere at the foot of Hasan Dağı, lay the episcopal center of Mokissos, and to the southeast, the settlements of Selime, Belisirma, and the Ihlara Valley. There are numerous unrecorded sites in the area as well; virtually every plateau bears traces of a Byzantine rock-carved settlement.

James Hanley, Carl Johnson IV, Bryan Lijewski, Amy Mayer (University of Illinois), Veronica Kalas (New York University), and Bissera Pentcheva (Harvard University). Traveling fellowships for the five University of Illinois architecture students were generously provided by Shelton and Muriel Hannig. During both seasons, Fariz Demir of the Aksaray Museum served as our government representative.

⁵For the historical geography of the region, see F. Hild and M. Restle, *Kappadokien*, TIB 2 (Vienna, 1981), 277–78, with further references.

COURTYARD UNITS

In three seasons at Çanlı Kilise, we have recorded about twenty-five large, rock-cut living units, as well as dozens of smaller, simpler ones. Most commonly, the large units consist of a series of rooms organized around three sides of a courtyard cut into the slope of the hill (Figs. 4–6). There is often evidence of a rock-cut portico along the main facade. In Area 13, for example, two arches of the open arcade remain, but most of the other courtyards preserve only remains of the decorated interior facade of the portico, as in Area 1. Many of the rooms have distinctive plans, and most units preserve both a chapel and a large, centrally positioned hall. The halls are often lavishly articulated and may be set either longitudinally or transversally, terminating in a rectangular niche. Many units preserve smaller cruciform or centrally planned halls as well. Some units have kitchens, topped by conical vaults, as well as rooms that may be identified as storerooms, cisterns, stables, and dovecotes.

Although these rock-cut units are usually termed “courtyard monasteries,” it is more likely that they were large houses.⁶ Several of the courtyard units lack a clearly identified church or chapel, and in none is the chapel placed in a central position. Instead, it is invariably placed off to one side, and the hall is given priority. Moreover, the standard form of the courtyard unit—pi-shaped, with a portico along the main facade, and with a chapel off to one side—is identical to what has been reconstructed from the archaeological evidence at the tenth-century Myrelaion Palace in Constantinople.⁷ Most likely, the rock-cut courtyard units were created in imitation of built residential architecture. The great number of large courtyard units may be unique among the Cappadocian settlements, and it suggests a certain level of affluence. Based on the evidence, we may suggest that the site was a prosperous, agriculturally based town, or *kōmē*, of the Byzantine period, with a concentration of homes for the well-to-do landowners.

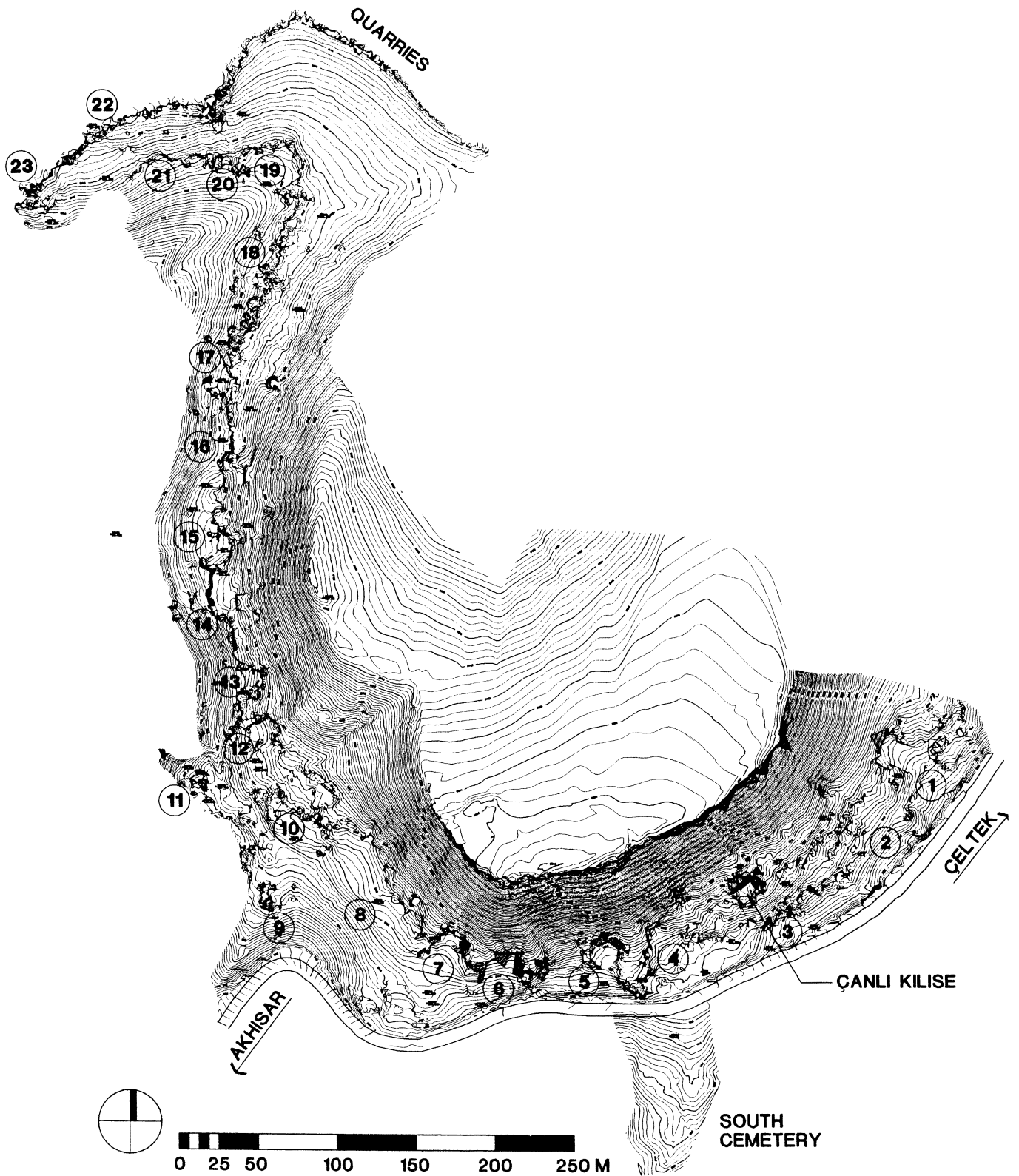
Only one unit surveyed could be clearly

⁶For the identification of these as “courtyard monasteries,” see, most recently, Rodley, *Cave Monasteries*.

⁷C. L. Striker, *The Myrelaion (Bodrum Camii) in Istanbul* (Princeton, 1981), fig. 26.



1 Çanlı Kilise settlement, seen from the west. The church is visible on the right, just below the plateau. The line of rock-cut features extends to the left from the church to beyond the edge of the photograph.



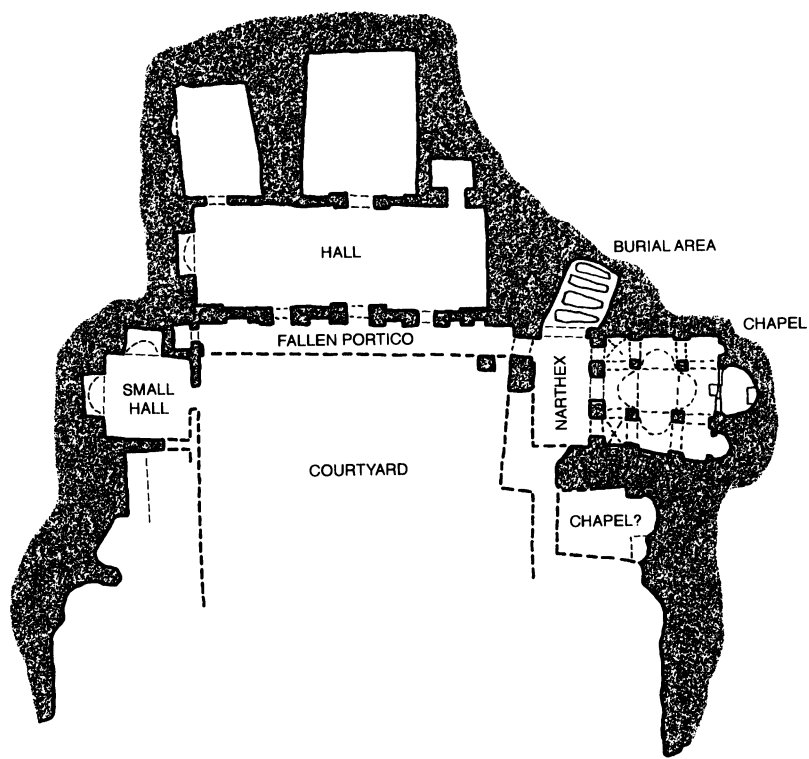
2 Çanlı Kilise settlement, contour plan of the entire site. Circled numbers indicate the residential units.

3 Plan of Areas 1–4. The rock-cut courtyard in Area 1 (*upper right*) is easily identified. The courtyard in Area 4 (*lower left*) is partially buried. Two underground features are accessible behind it.



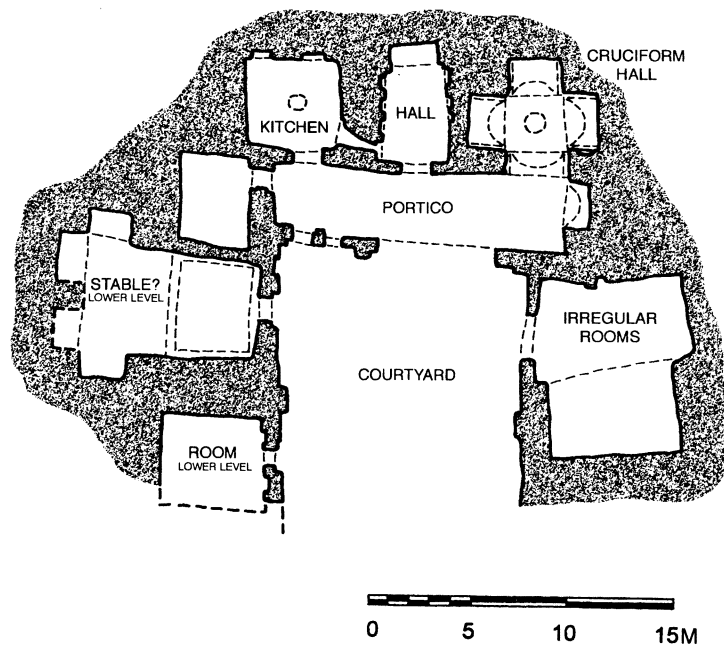


4 Area 1, facade of courtyard unit, looking north. The open portico has fallen, and the arcading is on what was originally the interior facade of the portico. The pigeonholed spaces above were probably screened by the original facade.

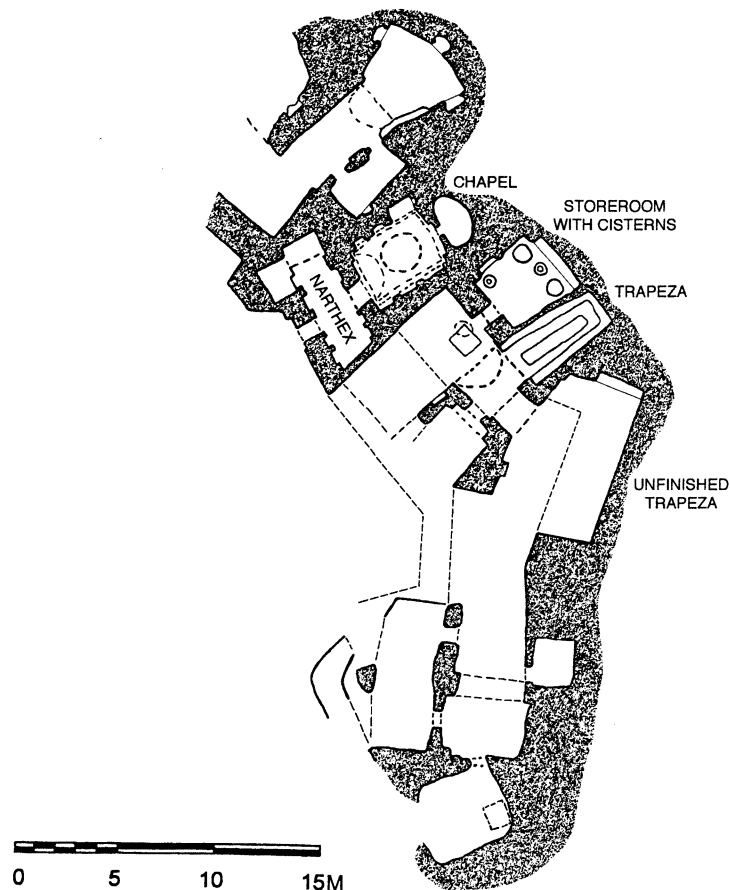


5 Area 7, reconstructed plan of courtyard unit. The major living spaces are organized on the main facade, with the chapel set off to one side.

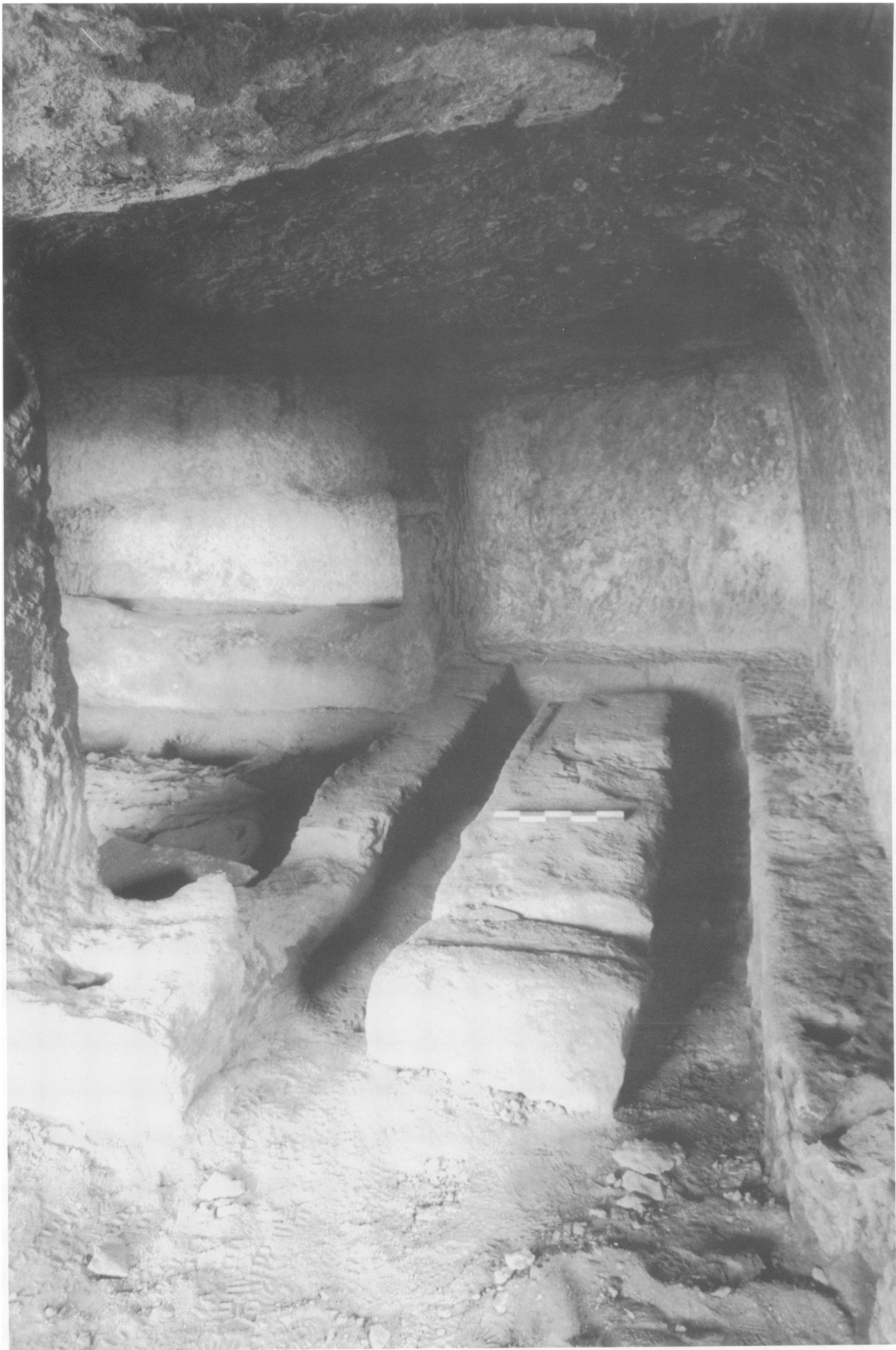
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6 Area 13, reconstructed plan of courtyard unit. A portion of the original portico survives on one side.



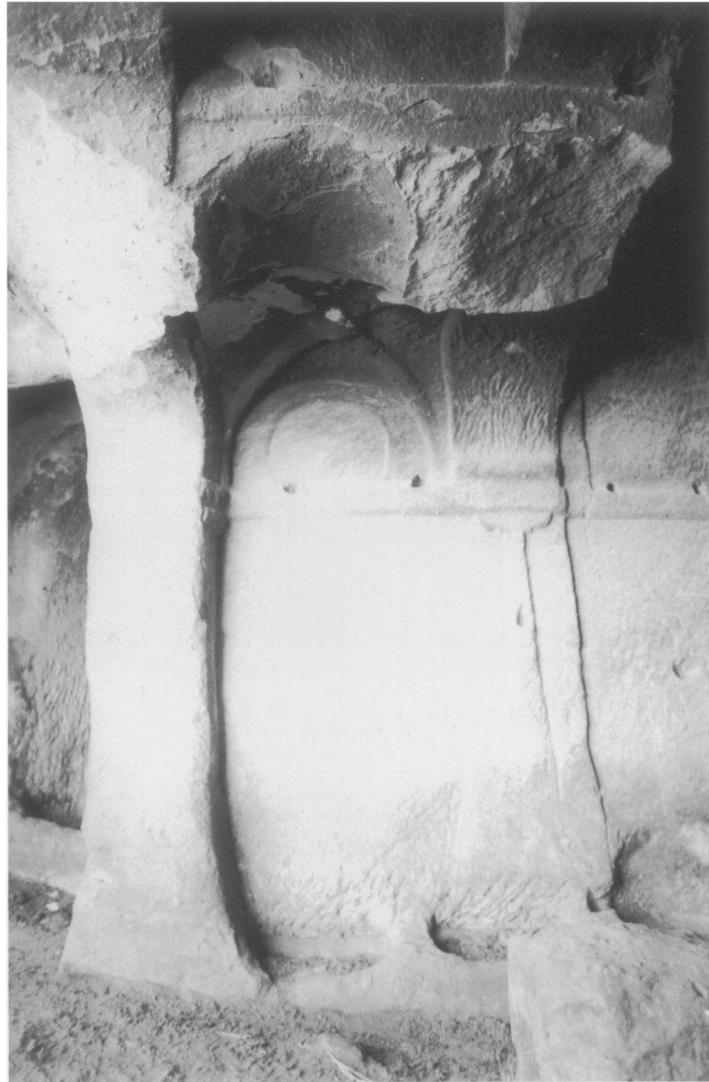
7 Area 17, reconstructed plan of monastery, with chapel and *trapeza* in central position



8 Area 17, interior of *trapeza*, looking east. Originally a wall separated the *trapeza* from the storeroom (to the left).



9 Area 6, interior of chapel, looking northeast. The sanctuary is raised two steps above the naos, separated from it by a low barrier. Cuttings appear in the reveals above for a wooden architrave.



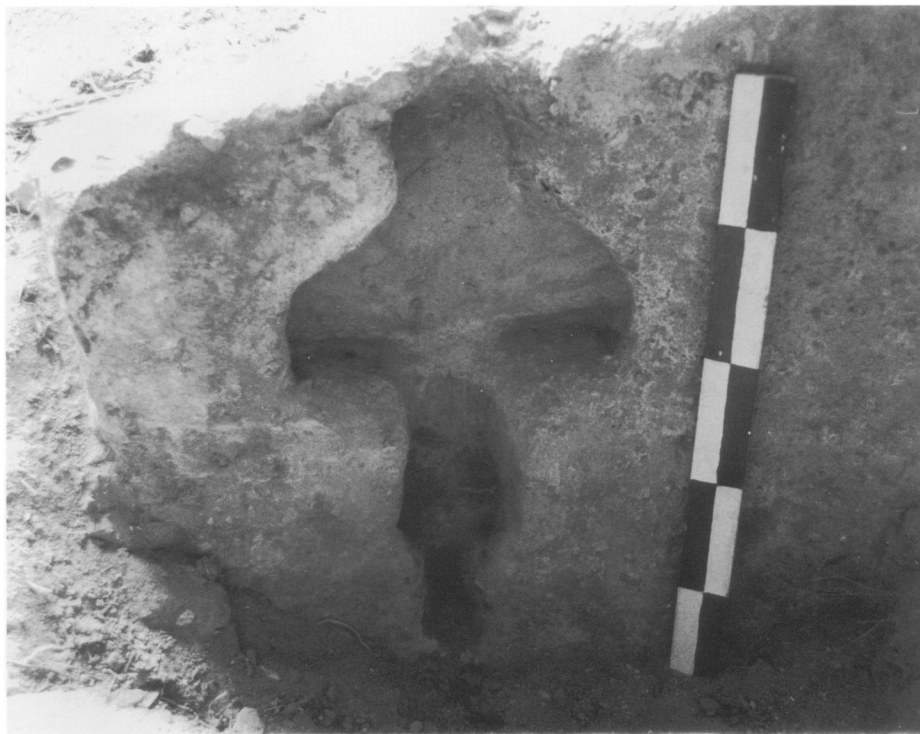
10 Area 7, interior of chapel, detail, looking north. The pilaster is decorated with a "proto-Doric" colonnette, and the corner bay is covered by a ribbed groin vault.



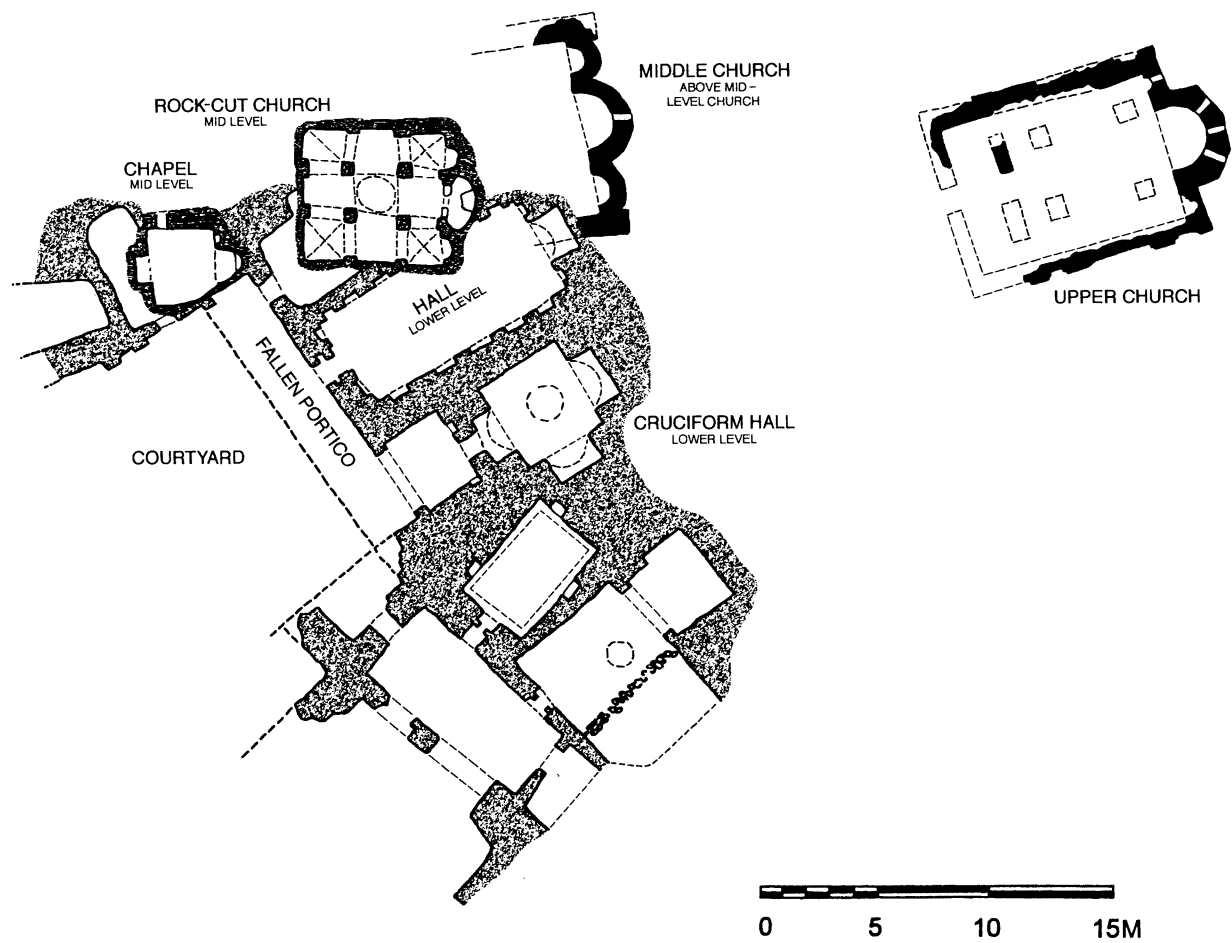
11 Area 17, upper church, drawing of the apse fresco: Christ enthroned, flanked by the Virgin and John the Baptist



12 Area 12, rock-cut chapel, drawing of the west wall fresco: Three Hebrews in the Fiery Furnace, with donors to either side



13 Area 12, rock-cut chapel, cruciform cutting on inner surface of sanctuary barrier



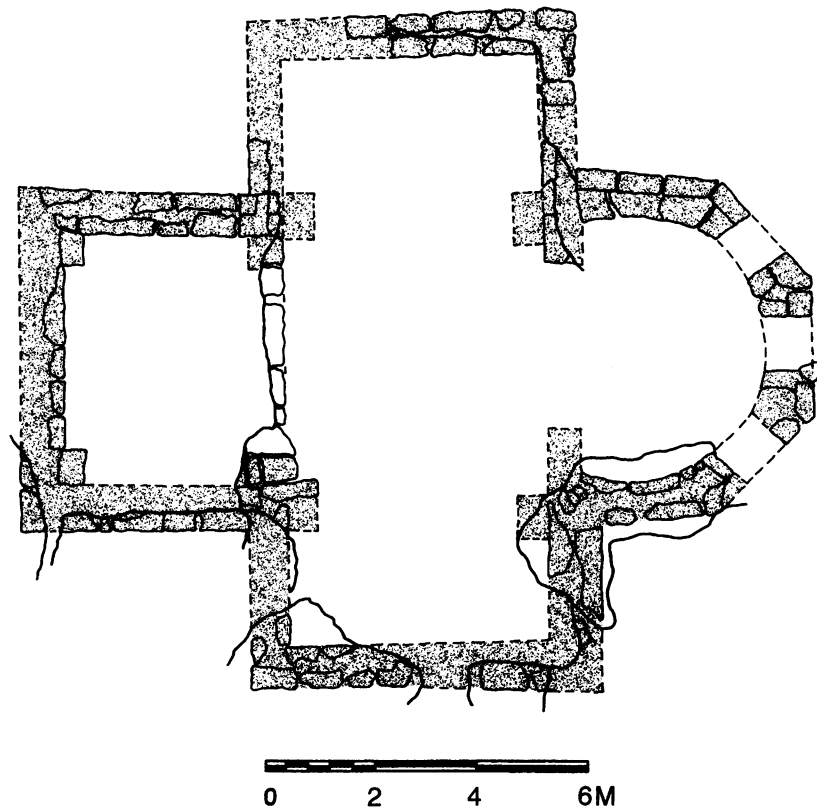
14 Area 12, partially reconstructed plan of courtyard unit including the foundations of two masonry churches on the hill above the rock-cut chapel



15 Area 12, pilaster capital from upper church



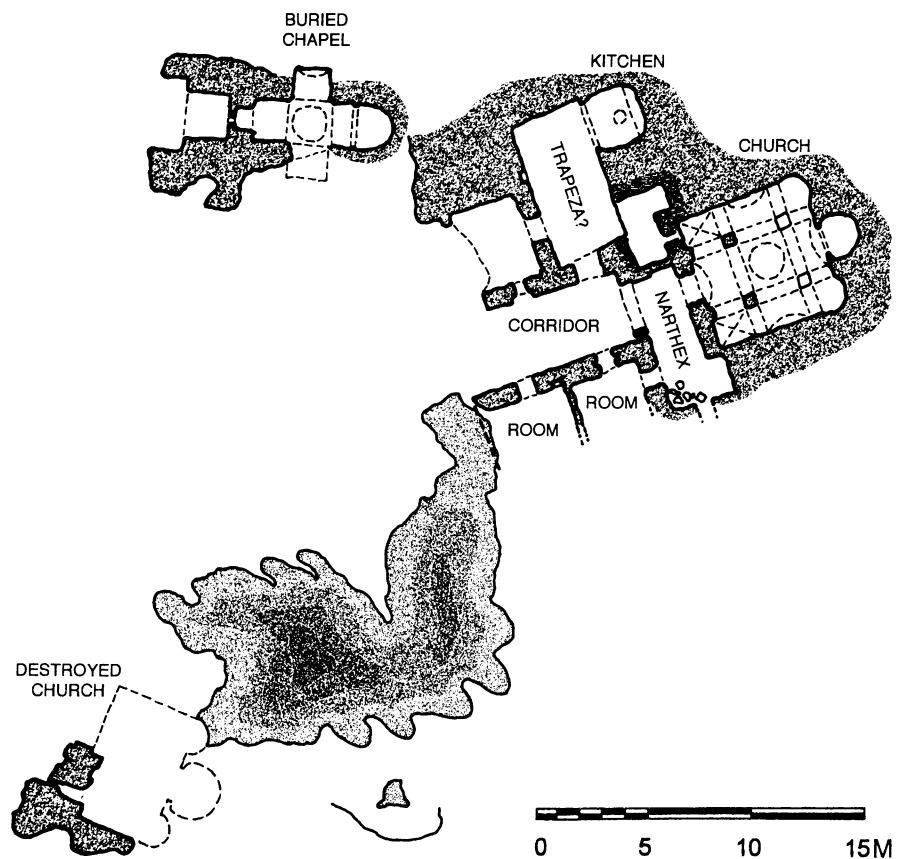
16 Area 14, carved gable in underground room



17 North Settlement, plan of church



18 North Settlement, mosaic tesserae from church



19 East Settlement (monastery?), plan

identified as a monastery. Its plan was considerably less well organized than those of the courtyard units, but it included a barrel-vaulted chapel and a dining hall, or *trapeza*, side by side—the latter identified by its rock-cut table and benches (Figs. 7, 8). Such distinctive features were found only in this one example.

Some further observations on the courtyard residences are in order. It was often difficult to reconstruct their original forms. In addition to natural deterioration, through their lifespan, the large houses appear to have been modified and subdivided for multiple-family occupation as the prosperity of the settlement declined. Ultimately they were either abandoned or converted to agricultural usage. In fact, several are still used to house sheep and cattle. With so many examples of domestic architecture at our disposal, we looked for evidence of function that might tell us how the individual spaces had been used. Each clearly possessed one or two formal, ceremonial spaces, augmented by rooms of utilitarian functions, such as cisterns and dovecotes, and these latter were given special attention. Frequently the cisterns took the form of rooms with floor levels lower than those of the surrounding spaces and were coated with hydraulic mortar; often they had holes in the ceiling above them for collecting rainwater. A smaller type of cistern had the form of a storage pit set into the floor; in the storeroom of the monastery in Area 17, two such pits were lined with waterproof mortar and had drains in the ceiling directly above them.

Evidence also suggests that many of the dovecotes—now such a common feature in Cappadocian settlements—were actually part of the original development of the site. Most of the courtyard residences preserve an irregular series of pigeonholed rooms on an upper level that would have been hidden behind the decorated facade and not directly accessible from the main level. With the collapse of the portico facades, the dovecotes are now exposed. Those visible in the photograph of Area 1 (Fig. 4), for example, would be invisible had the original portico survived. A similarly isolated dovecote was identified in Area 23, easily accessible from above but connected to the main level only by a small window. Such accommodation for the

collection of dung for fertilizer would have been necessary for the agricultural functions of the settlement in a region without rich soil.⁸

A variety of masonry walls were cleaned and examined throughout the settlement. Initially we hoped to discover a significant built component to the settlement, complementing the surviving rock-cut features, but the masonry architecture seems to have been limited to select churches. The walls were determined to be either retaining walls to protect the courtyard units from landslide or defensive walls guarding the individual residences and the access to the settlement. All of these masonry walls would seem to postdate the foundation of the settlement, belonging instead to the period of decline, when the inhabitants found themselves threatened by both marauders and the natural erosion of the unstable site.

CHURCHES AND CHAPELS

About thirty churches and chapels have been identified in and around the settlement. Most commonly, the chapels were placed off to one side of a courtyard unit, and most were equipped for burials, usually with tombs in the narthex or in a chamber off the narthex. Although one would perhaps not associate a burial area with a private house, such arrangements are known in Constantinople.⁹ The most common type of chapel at the settlement is the cross-in-square, echoing the plan of Çanlı Kilise itself, with the interior subdivided by four piers beneath a central dome, and with finely carved details, as may be seen in the churches in Areas 6 and 7 (Figs. 5, 9, 10). But there is a great variety among the churches and chapels: several are barrel-vaulted, one is covered by a transverse barrel vault, and a few small chapels have cruciform plans. Noteworthy among the interior details are numerous examples of ribbed groin vaults, a feature for

⁸One is reminded of the Palladian villas of the Italian Renaissance, which similarly combined stately residences and agricultural spaces (including dovecotes) into a formally organized entity.

⁹In addition to the Myrelaion Palace, whose chapel became the mausoleum of Romanos Lekapenos, one may note also the aristocratic residential chapel now known as the Bogdan Sarayı; see M. Papadopoulos, "Note sur quelques découvertes récentes faites à Constantinople," *CRAI* (1920), 63.

which a tenth-century date is sometimes suggested (Fig. 10).¹⁰

In addition to the architecture of the churches and chapels, we have recorded evidence for fresco decoration and for the details of the sanctuary. There does not appear to have been a standard form of templon separating the sanctuary from the naos; most chapels included a low barrier, but only one (in Area 2) preserves any evidence of a carved epistyle. However, there is evidence of alterations in several bemas, and most (but not all) examples preserve cuttings for the inclusion of a wooden epistyle.¹¹

Many churches preserve fragments of fresco. For example, a church above Area 17, toward the northwest end of the settlement, had a *Deesis* represented in its apse, with a large figure of Christ enthroned between the Virgin Mary and John the Baptist (Fig. 11). Its dedicatory inscription reads τοῦ δούλου τοῦ θεοῦ (“of the servant of God”), but the donor’s name is missing. A framed, iconic image of an equestrian saint was represented on the north wall, just outside the bema. Based on the hieratic, linear style, these may be dated to the tenth century.¹²

Another rock-cut church in Area 12, toward the middle of the settlement, preserves several images of angels and a unique dedicatory image with the donors of the church accompanying a scene of the Three Hebrews in the Fiery Furnace (Fig. 12). The female donor, on the left side, wears a dark gown with a slit up the front. The other donor representation, to the right side, is all but destroyed. Arranged in a row, the donors and Hebrews are in identical postures, with hands raised before their breasts in a gesture of prayer. The Hebrews are

haloed, and orange flames appear beneath their feet. The furnace’s fire does not extend below the donors, however. In Byzantine art, this scene is normally represented with the angel’s wings extended over the Three Hebrews, but in this example the wings follow the curve of the vault and extend over the donors as well. We would suggest an eleventh-century date for these frescoes.

On the inner face of the templon of this church we discovered a cruciform cutting, about 40 cm across, perhaps once housing a reliquary or a processional cross (Fig. 13). It includes both flared arms for the cross and an extension for the handle.

In addition to Çanlı Kilise itself, the foundations of several other masonry churches have been identified. Consequently the site must have had a much different appearance in the Byzantine period, with both rock-cut and masonry architecture side by side. The last rock-cut church discussed is particularly interesting because on the hill directly above it, on almost the same alignment, we identified and cleared the foundations of two masonry churches during the 1995 season (Fig. 14). The lower of the two, whose western foundations have fallen away, must have extended above the church just discussed. The upper church was probably a cross-in-square, with stepped pilasters on the exterior. We found some architectural sculpture here as well (Fig. 15). Below and on the same line, a room of the courtyard residence was converted to an *ad hoc* chapel. All four must have functioned at the same time. For reasons that remain obscure, a sort of sacred axis was created, with four chapels more or less in a row.

Foundations in Area 2 were cleaned in 1996, revealing the plan of a small cross-in-square church without a narthex, measuring 7 m square. On its south side, the foundations were cut from the bedrock. Construction materials and details are similar to the church above Area 12 studied in the previous season. Limited evidence of fresco decoration was found in the apse.

“UNDERGROUND CITIES”

In addition to the surface features, we also found several multilevel places of refuge cut deep into the hill behind the rock-cut settle-

¹⁰See Ch. Bouras, *Byzantina stauroutholia me neuroseis* (Athens, 1965), who deals primarily with the masonry architecture of Greece.

¹¹The sanctuary barriers in this area would appear to be considerably different than those in eastern Cappadocia, where the carved epistyle above arched openings is more common; see N. Asutay and R. Warland, “Kreuzkuppelkirche und Klosteranlage im Kızılçukur bei Çavuşin/Kappadokien,” *IstMitt* 42 (1992), 307–21; N. Asutay-Fleissig, *Templonanlagen in der Höhlenkirchen Kappadokiens* (Frankfurt am Main, 1996), is in press. I thank Philip Storey for his careful study of the sanctuary arrangements at Çanlı Kilise.

¹²The apse fresco was noted by N. Thierry, “Études capadociennes: Région du Hasan Dağı,” *CahArch* 14 (1975), 183–89, who proposed a 10th-century date. I thank Nilay Çorağan for her assistance with the frescoes.

ment (Fig. 3). Following the common parlance of Cappadocian studies, we refer to these as “underground cities,” although “underground villages” is perhaps more appropriate to their small scale. The entrance tunnels were protected by an elaborate series of rolling stone doors. However, the forms of our underground elements were different from the other “underground cities” of the region, and several included rubble walls as well as rock-cut elements, chambers with cornices and barrel vaults, and even some architectural sculpture. One underground room above Area 14 preserved a uniquely carved gable (Fig. 16). On careful examination, we concluded that the larger and more carefully carved of our “underground cities” were actually courtyard houses that had been buried by landslides and subsequently converted into refuges with the addition of tunnels and rolling stone doors. This may suggest something of the ongoing life at the site, and it parallels the transformations at other courtyard residences, where additional back rooms guarded by rolling stones were carved.

GEOLOGY

During the 1996 season, some attention was given to the geology of the site, which alternates strata of unstable volcanic ash with more stable strata of volcanic tuff. The plateau on which Çanlı Kilise is located is topped by a nonvolcanic layer of limestone, but this does not extend to the northern end of the site. The northern plateau is topped instead by a hard gray tuff, which is set above an ash layer and is subject to mass wastage. As a consequence, large areas of collapse have destroyed the original impression of this portion of the site.

Between Areas 11 to 17, the settlement units were carved into a layer of tuff immediately above an unstable ash layer, and this area has also suffered from mass wastage. This is perhaps most evident in Area 11, where a residence was carved into an isolated outcropping. Undercut by the erosion of the ash layer beneath it, the rock pinnacle containing the chapel has separated from the outcropping and slid down the hill. Elsewhere the softer tuff has been subjected to weathering and surface erosion.

On careful examination it was determined

that all of the masonry churches were constructed of the hard gray tuff, which is distinct from both the harder limestone of the plateau and the softer purple tuff into which the settlement was carved.¹³ It seems odd that the limestone was not employed as the building material, but it may have proven too hard for the masons to carve efficiently. The probable quarry was identified above the north end of the settlement, above Areas 19 and 20, where there is much evidence for the cutting and removal of stone and where the hard gray tuff matches the building material.

OUTLYING SETTLEMENTS

We also cleaned and recorded the masonry foundations of a cruciform church and an adjacent rectangular building about a kilometer north of the site, which we called the North Settlement. The church had a horseshoe-shaped apse with large windows (Fig. 17). The buildings in this area date from the early Christian period, perhaps sixth century, and the church compares in plan and details to other examples of early Christian masonry architecture in western Cappadocia.¹⁴ The North Settlement does *not* appear to have been occupied at the same time as the main settlement. No glazed ceramics were found in this area, and some late Roman red-slip ware was noted. Nor is there evidence of a rock-cut settlement around the buildings. Significantly, fragments of mosaic decoration were found in the collapsed vaulting of the church, and these may be the first evidence of mural mosaic decoration in Cappadocia (Fig. 18). To the east of the church, along the ridge of hard volcanic tuff, was much evidence of the quarrying for the building stone. To the northeast were a small cemetery and the entrance to an underground feature, now blocked. This particular site could not be fully examined and would clearly benefit from a proper excavation.

Our architectural survey also included a site that lies about a kilometer east of Çanlı Kilise, on the slope of the next hill, which we called the East Settlement. This may have been a

¹³We are grateful to archaeogeologist Michael Ramage for his expertise at stone sourcing.

¹⁴See M. Restle, *Studien zur frühbyzantinischen Architektur Kapadokiens*, Veröffentlichung 3 (Vienna, 1979), figs. 27, 32, 45, for comparisons.

monastery, composed of a small cluster of rooms with two large churches and two smaller chapels (Fig. 19). The organization of this unit differs significantly from the others, with the central feature being a large church reached by a long corridor that provides access to the other main rooms. An L-shaped space to one side of the church may have included the *trapeza* or dining hall, but its interior is buried by more than a meter of dirt. The crossarm of this room is topped by a conical vault and a chimney that suggest it was the kitchen. Unfortunately, most of the spaces in this area have become eroded or have been buried by landslide.

A third outlying site was recorded about 3 km northeast of Çanlı Kilise, near the road to Çeltek, with a group of three rock-cut churches. The most interesting of these is a small, roughly carved church with a crudely

painted fresco cycle dedicated to the Life of the Virgin. It probably dates from the early middle Byzantine period.¹⁵

CONCLUSION

The comprehensive survey of the settlement at Çanlı Kilise is beginning to reveal a unique view of daily life in Byzantine Cappadocia. It is also providing important information about domestic architecture, town planning, and settlement patterns. At the same time, it raises significant questions about monasticism, masonry architecture, and the mysterious “underground cities” of Cappadocia.

University of Illinois at Urbana-Champaign

¹⁵A separate publication of this is planned, co-authored with my 1995 assistants, Philip Storey and Nilay Çorağan.